DOCUMENT RESUME

ED 418 470 EA 028 370

AUTHOR Knoblock, Christopher
TITLE The Process of Allocating Human Resources in an Era of Education Reform: The Practitioner's Perspective.
PUB DATE Mar 97
NOTE 24p.; Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, IL, March 24-28, 1997).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Educational Change; Elementary Secondary Education; Graduation Requirements; *Human Resources; Participative Decision Making; *Personnel Policy; *Resource Allocation; State Legislation; State Standards; Teacher Placement; *Teacher Selection; Teaching Conditions; Tenure
IDENTIFIERS *New York

ABSTRACT

Since the early 1980s, the New York State Board of Regents and the State Education Department have advanced a complex reform agenda centered around the development of curriculum and related standards. These reforms have considerable implications for the allocation and use of human resources within schooling systems. This paper reports on a series of case studies aimed at understanding three things: (1) what policy changes regarding allocation of human resources have occurred at the local level in response to state-initiated programs; (2) what impact have these policies and other reform strategies had on managerial and classroom practices; and (3) what are the implications of these findings for future policymaking and research. Data were obtained from a diverse sample of 12 schools in 6 public school districts in New York State. Methods included document review and interviews conducted with a total of 32 district and building-level administrators and teachers. The paper identifies six factors that affected the human-resource-allocation process at the local level: state guidelines; enrollment projections and student needs and wants; collective bargaining agreements; program initiatives and student performance; staff expectations; and facilities and scheduling constraints. School districts also varied in their capacity to respond to state-initiated reforms such as "The Board of Regents Action Plan" and the "New Compact for Learning." The interview data describe how four broad areas of reform affected the resource-allocation process: content emphases, standards and expectations for students, standards and expectations for teachers, and instructional time. Two tables are included; the appendix contains the interview instruments. (Contains 21 references). (LMI)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 408 659

The Process of Allocating Human Resources in an Era of Education Reform: The Practitioner's Perspective

Christopher F. Roellke
University of Richmond

Paper prepared for the
American Educational Research Association
Chicago, IL
March 24-28, 1997

WORKING DRAFT--PLEASE DO NOT CITE OR QUOTE

BEST COPY AVAILABLE

Comments Welcome:

North Court 311
University of Richmond
Richmond, VA 23173
Email: croellke@richmond.edu
Ph: (804) 289-8432
Fax: (804) 287-6053

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY
C. Roellke
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

EA 026 927

The Process of Allocating Human Resources in an Era of Education Reform: The Practitioner's Perspective

Abstract

Since the early 1980's, the New York State Board of Regents and the State Education Department have advanced a complex reform agenda centered around the development of curriculum and related standards. These reforms have considerable implications for the allocation and use of human resources within schooling systems. While it has been over a decade since the State formally introduced it's reform strategy, it remains unclear as to how local education agencies (LEA's) have responded to these efforts. In particular, little is known about the specific impact of these reforms on local policies regarding the allocation of human resources within schooling systems. In addition, we know little about the impact of these reforms on the actual work of practitioner's within schooling systems. This paper reports on a series of case studies aimed at understanding three things: 1) what policy changes with regard to the allocation of human resources have occurred at the local level in response to State initiated reform? 2) what impact have these policies and other reform strategies had on managerial and classroom practice?; and 3) what are the implications of these findings for future policymaking and research?

Utilizing data collected from a diverse sample of ten schools in four public school districts in New York State, the author outlines the conditions and constraints at the local level which impact the configuration of professional staff within schools and classrooms. District and school level budgets, policies, and collective bargaining agreements were collected and analyzed. A total of thirty interviews were conducted with district and building level administrators and classroom teachers. Based on these data, six factors are identified that affect the human resource allocation process at the local level: 1) state guidelines; 2) enrollment projections and student needs and wants; 3) collective bargaining agreements; 4) program initiatives and student performance; 5) staff expectations; and 6) facilities and scheduling constraints. Interview data also reveal that school districts vary in their capacity to respond to State initiated reforms such as The Board of Regents Action Plan and the New Compact for Learning.

The case study findings reviewed in this paper demonstrate the value of complementing and supplementing empirical analyses with qualitative descriptions of resource allocation phenomena. In particular, interview data and district and school level documentation provide insights into the complex process of allocating and using human resources within schooling systems.

I. Introduction

This paper is an outgrowth of a larger research effort of the Finance Center of the Consortium for Policy Research in Education (CPRE). The research project, known informally as "what dollars buy," was conducted in four states: California, Florida, Minnesota and New York. Because school reform often involves an influx of new resources to school districts, policymakers and researchers are interested in how districts are spending the additional money they are receiving. The strategy in each state has been to begin with empirical studies of resource flows using centrally collected data and then move to progressively more micro levels of analysis. The empirical analyses are beginning to shed light on the relationship between school reform and internal resource allocation patterns (Monk, Roellke, and Brent, 1996; Picus, Tetreault and Hertert, 1995; and Nakib, 1995). This piece extends these analyses with more qualitative indicators of resource allocation and use within schooling systems.

Particular emphasis in this paper is placed on the effect of externally initiated reform efforts on the process by which human resources are allocated and used. The paper points to the importance of recognizing the multiple and sometimes competing perspectives of policymakers, local practitioners and educational researchers with regard to school reform efforts. Practitioners, in particular, can provide insight into the constraints administrators and others confront when making staffing decisions as well as insight into the impact these decisions have had on classroom practice. Interview data can also shed light on how local education agencies (LEAs) have responded to specific aspects of the reform agenda within New York State. In this study, I was specifically interested in understanding the local response to the externally initiated reforms of the last decade in New York State: The Board of Regents Action Plan (1984) and The New Compact for Learning (1991).

I begin the paper with a brief review of these reforms and the potential implications for the allocation and use of human resources. Following a discussion of sampling and methodological issues, I outline the role played by the primary participants in the staffing allocation process and identify a variety of factors which are considered throughout this decision-making process. Discussion then turns to the practitioner's perspective on State-initiated reforms of the last decade. I conclude the paper with a brief discussion of results and identify possible directions for future research.

II. An Era of Education Reform

In the 1980's and early 1990's, a multitude of national reports described an educational system plagued with ineffectiveness. On the Federal level, most notable of these reform initiatives was A Nation at Risk (1983), published by the National Commission on Excellence in Education. The Commission argued that the whole educational system needed to be restructured and revitalized through standardized, "back to the basics" curricula, increased graduation requirements, and state level control. Specifically, the Commission asserted that high school students should complete a core curriculum that includes: four years of English; three years of science; three years of mathematics; two years of a foreign language; and one-half year of computer science.

Another influential national report, The Carnegie Forum on Education and the Economy Report (1986) proposed a different set of reforms; reforms that would

enhance teacher professionalism and satisfaction in the workplace. In addition to higher teaching salaries, the Carnegie Report advocated a greater teacher voice in decision-making, increased opportunities for professional development, and more reasonable workloads for teachers. New York was one of many states that quickly responded to the influential national reports of the 1980's and developed its own reform strategy.[1] The Board of Regents Action Plan to Improve Elementary and Secondary Education Results in New York (1984) echoed the "back to the basics" theme of the national reports and advocated increased graduation requirements, higher standards for personnel, and greater accountability. The most specific recommendations in the Regents Action Plan were targeted at the secondary school curriculum, with particular emphasis placed on high school mathematics, science and foreign language curricula. The State's more recent reform strategy, A New Compact for Learning: Improving Public Elementary and Secondary Education Results in the 1990's (1991), is a systemic reform strategy which stresses principles of local control and decentralized decision-making.

A content analysis of these major reform efforts in New York State reveals four broad and overlapping categories of reform: 1) increased emphasis on core subject area content; 2) higher standards and expectations for students; 3) increased instructional time; and 4) higher standards and expectations for teachers.

The first category of reform involves the standardization of a "core curriculum" for all students. The subject areas emphasized in this core curriculum are English, mathematics, science, social studies and foreign language. The second category of reform, standards and expectations for students, calls for increased graduation requirements, additional homework and additional assessments of student work. Also included in this category of reform is the effort to improve academic rigor of textbooks and instructional materials. The third category of reform, instructional time, focuses on maximizing the amount of learning opportunities for students through lengthening the school day, lengthening the school year and improvements in scheduling. The fourth category of reform, standards and expectations for teachers, encompasses issues of teacher accreditation, professional development and workplace satisfaction. Recommendations in this category of reform include enhancing professional development opportunities, encouraging innovation in the classroom through the use of grants and incentives, and reducing teacher workloads. In addition to reducing overall pupil loads, efforts in this area include minimizing disciplinary and administrative burdens for teachers.

Emerging within these categories are potentially contradictory themes in the reform agenda. On the one hand, the reform involves the push for more central control, standardization, and accountability. On the other hand the reform also emphasizes decentralized decision-making, teacher professionalism, and teacher satisfaction with the workplace. Another important potential contradiction within these reform efforts centers around the use of teacher time. The reforms seek to simultaneously increase student contact time with teachers (particularly in core subject areas) and the amount of time teachers devote to planning, decision-making, parental and community accessibility, and professional development activities. It will be important to determine how school districts have responded to these potential contradictions. Conceivably, it would be difficult for school districts to address these competing uses of teacher time without adding additional staff or increasing the

[1] By 1990, for example, over 40 states had increased graduation requirements in a direct response to the Nation at Risk Report. See Coley (1994).

school day/year.

It would not be feasible to assess the local response to every aspect of this highly complex set of reforms. Consequently, it is important to establish some priorities. Any effort to simultaneously shift content emphases, raise standards for students, expand instructional opportunities, and improve the working environment of teachers, is likely to require substantial changes in the manner in which school personnel are allocated and utilized. This paper, with its focus on how human resources have been distributed and used over time, permits an analysis that cuts across all four categories of reform.

For example, The Board of Regents Action Plan (1984), explicitly calls for an increase in the graduation requirements in foreign language from one unit to four units. In order to meet the State's expectation in the foreign language area of the curriculum, school districts conceivably have four options regarding the allocation of human resources: 1) increase the class size within existing foreign language courses or require existing foreign language teachers to teach additional sections 2) shift existing staff members in other subject areas to foreign language; 3) recruit and hire additional teachers in foreign language; or 4) reconfigure human resources through some combination of the first three options.

There are a number of potential constraints at the local level which may limit the number of options available to a school district.[2] Collective bargaining agreements, which typically specify teacher workload expectations and class size targets, may place limitations on what school districts can expect of existing staff (options one and two). Fiscal constraints might prohibit a poor district from adding additional staff (option three). In this case, a district might be forced to consider the allocation and use of human resources a "zero-sum game", that is if one area receives additional resources, something else must be left out or de-emphasized. These potential constraints contribute to the rationale for integrating selected district structural characteristics to the analyses, such as school district enrollment size, district spending level, and district fiscal capacity.

III. Methodological and Sampling Issues

There are several sources of district and school level data. District and school level budget information as well as collective bargaining agreements between the teachers' association and the school district were collected from each site.[3] The collective agreements contain information regarding time expectations for faculty and definitions of full-time-equivalent. In some cases, collective bargaining agreements also contain pupil load limitations by grade level or subject area. Changes in these limitations and definitions over time can have significant implications for the allocation and use of teaching resources.

Student-parent handbooks, which contain information on graduation requirements, student expectations, academic calendars and school goals, were also collected from each of the secondary schools within the sample. Also collected were

---

[2] For additional discussion of how local constraints affect the resource allocation process, see Nakib (1995) and Roellke (1996)

[3] All collective bargaining agreements since 1983 were requested from each of the four school districts. In two of the districts, only the two most recent collective bargaining agreements were available.

any formal district or school policies and guidelines pertaining to the allocation of personnel.

Interviews were conducted with district-level administrators, building-level administrators and veteran secondary school teachers.[4] These are the key informants in this inquiry as they can provide valuable insights into resource allocation phenomena as well as insights into the context in which education reform is carried out. General, open-ended interview protocols were used in order to provide consistency across the sample. Sample interview protocols for both administrators and veteran teachers are contained in the appendix. Reflections of administrators and teachers regarding resource allocation decisions within their schooling systems were solicited in the interviews. Opinions were solicited regarding the two State reform efforts of the last decade (i.e., Regent's Action Plan, New Compact for Learning). Particular attention was given to those aspects of reform which deal most directly with the allocation and use of professional staff within local education agencies (LEAs).

In addition, interviews were directed at those aspects of human resource allocation and use that could not be directly assessed through an analysis of State collected data or existing documentation. Specifically, efforts were made to understand the process by which staffing decisions are made at various levels within schooling systems. Veteran teachers were also asked to reflect on how their instructional practices and other uses of their professional time have changed over the twelve year period.

The sampling strategy can be characterized as purposive and criterion-based (Patton, 1990). Purposive and criterion-based sampling for qualitative interviewing involves the identification key informants.

> Key informants are individuals who possess special knowledge, status, or communications skills, who are willing to share their knowledge and skills with the researcher and who have access to perspectives or observations denied the researcher.[5]

The key informants (N=30) in this inquiry are district-level administrators, building level administrators and veteran secondary school teachers. A sample of key informants were selected from each of the four school districts. District level and building level administrators provided insights regarding the process by which human resources are allocated within schooling systems. Veteran teachers commented on their role in this process and how district and school level resource allocation decisions have impacted their professional lives. Interviews lasted between twenty-five minutes and seventy five minutes, with the average interview lasting approximately forty minutes.

Two criteria were employed for the selection of veteran teachers: 1) the teacher had to be a secondary school teacher who had taught in the same school for at least the last ten years (1985-1995); 2) the primary teaching responsibilities of the interviewee must have been within one of the core subject areas emphasized in the reform literature (English, science, mathematics, social studies, or foreign language).

---

[4] Interview protocols for administrators and teachers can be found in the appendices.
[5] Crabtree and Miller (1992), p.75.

Secondary school building principals were informed of the selection criteria and were asked to identify teachers who could serve as key informants. Requests were also made to obtain a diversity in the sample with regard to overall classroom experience and gender.

A total of seven district-level interviews were conducted. Four of these interviews were with the chief business official at each of the four sites. One superintendent, one assistant superintendent for personnel, and one assistant superintendent for instruction rounded out the sample of seven district-level administrators. Two of the business officials were interviewed twice. A total of eight building principals were interviewed, three at the elementary level and five and the secondary level. Two of the secondary school principals were interviewed twice.

Fifteen veteran teachers were interviewed, all of which teach at the secondary school level. Of these fifteen teacher interviews, five were conducted with English teachers, three were conducted with social studies teachers, two were conducted with science teachers and two were conducted with mathematics teachers. The years of experience of the teachers ranged from 20 years to 32 years, with the average being 24 years. The matrix below (Table 1) displays how this sample was distributed across the four sites by staff category and by gender.

Table 1
Matrix of Interview Sample (N=30)

Staff Category	Large Wealthy	Large Poor	Small Wealthy	Small Poor	Totals
District Level Administrators	1F*, 3M	1M*	1M	1M	1F,6M
Building Level Administrators	1F, 1M	1F,2M	2M**	1M**	2F,6M
Secondary School Teachers	2F,1M	3F	2F,2M	3F,2M	10F,5M
English	1F		1F,1M	2F	4F,1M
Mathematics	1F	1F			2F
Science			1M	1M	2M
Social Studies	1M	1F		1M	1F,2M
Foreign Language		1F	1F	1F	3F
Totals	4F,5M	4F,3M	2F,5M	3F,4M	13F,17M

*At these sites, the chief business official was interviewed twice.
**At these sites the secondary school principal was interviewed twice.

IV. The Resource Allocation Process in Education

There are a variety of staffing decisions that need to be made within schooling systems. These decisions include, but are not limited to: a) determining staffing needs;[6] b) selecting candidates from a pool of applicants; and c) allocating specific staff members to particular subjects (e.g., earth science vs. physics) and course levels (e.g., advanced vs. remedial). A number of different actors participate in this decision-making process: school board members, district level administrators,

[6] A series of decisions, of course, contribute to the determination of staffing needs. Decisions regarding appropriate class size and overall pupil load in particular subject areas, for example, will affect specific staffing needs.

building principals, guidance counselors, department chairpersons, teachers, parents, and students. The building principal, however, has a very influential role as he/she coordinates most of the staffing allocation process, including the development of personnel recommendations and the hiring and assignment of new staff members. District level administrators will modify and refer principal recommendations to the school board for approval.

Each of the principals interviewed solicit the input of staff members in the decision making process. Guidance counselors provide principals with enrollment projections based on student course selections. On the secondary level, department chairpersons or coordinators will inform principals of desired assignments within particular subject areas and grade levels. Individual teachers may also consult with the principal to express desired schedules and subject area assignments. Students and parents can also play a very significant role in the process as there is some degree of freedom in selecting programs of study and particular subjects. Demand for courses is, to a large extent, a function of the kinds of choices that parents and students make about schooling.

Factors in the Staffing Allocation Process

Interviews with district and school level administrators and classroom teachers revealed that several factors are considered when determining staffing needs within the four districts and ten schools within the sample.[7] Each of the following factors will be discussed in turn:

1. State guidelines
2. Enrollment projections and student needs and wants
3. Collective bargaining agreements
4. Program initiatives and student performance
5. Staff expectations
6. Facilities and scheduling constraints

State Guidelines

Local education agencies are required to follow state guidelines for curriculum offerings, graduation requirements, provision of special education services, teacher certification, etc. These guidelines can play an important role in the staffing allocation process at the local level, although the degree of impact is variable across different types of local education agencies. The principal of a large, wealthy, suburban high school, for example, downplayed the role of state guidelines in her community:

> ...to be frank, they (state guidelines) don't have much of an impact on us here. We are a fairly traditional school in a fairly traditional community. In some ways, the State requirements aren't rigid enough for us. We don't have much trouble meeting minimum standards.

Some administrators, however, expressed frustration that these guidelines and requirements fail to take into account fiscal and practical constraints within schools. In particular, administrators in the two smaller districts reported difficulty in allocating existing staff to meet state guidelines. As a result, these smaller districts find themselves in a position of trying to fill several diverse, part-time needs.

---

[7] The ten schools comprised of four elementary schools (K-6), two middle schools (7-8), two high schools (9-12) and two combination junior/senior high schools (7-8, 9-12).

These smaller districts, for example, rely heavily on staff who are dual certified and actively recruit teachers who are qualified to teach multiple subjects. A junior/senior high school principal in a small, poor, rural district commented on this issue:

> ...in a small school like this, we have to get creative. We just hired a teacher to do three sections of English, a section of social studies, and a computer science section. Dual certification is the best bargain I can buy. English and social studies in particular. You give me a good teacher who can do both, I want to sign them up. Those areas of the curriculum have the greatest ripple effect in my staffing because they are two core subject areas with remediation attached to them.

Smaller districts also seek candidates who are multiply certified within the science and mathematics area of the curriculum as well as in foreign language. This selection criterion does not appear to be a significant factor in the larger districts.

Occasionally, districts will have to assign a teacher outside his or her area of certification in order to meet staffing demands. Administrators will seek to fill spot courses with existing staff members. Typically, the spot assignment will be a "lower level" course so that the level of academic preparation required on the part of the teacher is minimized. No mention was made of efforts to provide additional resources in the form of training or assistance to those teachers assigned to courses outside their area of expertise.

Administrators expressed some frustration with the State regarding the long, drawn out process required to justify an out-of-certification-area assignment. The alternative is to hire part-time people, which administrators try to avoid because of the expense of paying for fringe benefits for these employees.

Enrollment Projections and Student Needs and Wants

In each of the sites, enrollment projections and student needs and wants drive a good deal of the staffing decision making process. District level and school level administrators talk about balancing out "needs" and "wants" in the staffing allocation process. A "need" is a course or subject area that is required for graduation or for a particular program of study. Students requiring special services or modified instructional programs also dictate "needs" within schooling systems. A "want" may be a new program initiative, an elective course, or a student demand for a particular type of course offering.

A principal from a small, suburban, wealthy high school commented on the enrollment increases coupled with an increase in the demand for elective courses within the district:

> ...student demands drive a lot of our allocation decisions. We are experiencing about a 5% enrollment increase and the students are asking for a great deal more electives. They want two or three years of electives rather than just one. We are having trouble keeping up with this demand.

Administrators are faced with the task of balancing student needs and wants with broader instructional goals. Complicating this balance is the goal of being efficient and fiscally responsible. A building principal in the small, poor district commented on the difficulty in achieving this balance:

...sometimes I get stuck. If I get a kid who is going for a business track and needs a class to graduate, even if there are only three kids in there, I've got to offer it. I only have 18 kids in the entire business program yet I have over 30 kids in other classes.

Collective Bargaining Agreements

When making staffing allocation decisions, these needs and wants of students must be considered in concert with workplace parameters stipulated in teachers' contracts. These collective bargaining agreements between the school district and the teachers' union typically specify the number of classes a teacher can be assigned, class size targets, overall pupil load limits, and number of supervisory and preparation periods allotted to each teacher. In each of the four sites, for example, middle school and secondary school teachers are generally not assigned to more than five sections of classes. If teachers voluntarily take on a sixth section, they are normally relieved of any supervisory duty (study halls, cafeteria duty, etc.). In each of the sample districts, no additional salary is provided to teachers who take on a sixth class.

Table 2 outlines the class size and pupil load guidelines specified in the most recent collective bargaining agreement from each of the four sites in the sample.[8] The smallest class size guidelines are found at the elementary level (particularly the early childhood years) and in remedial offerings. The highest class size target is found for regular offerings at the secondary school level in the large, poor district.

Table 2
Contractual Agreements Regarding Class Size and Pupil Load
by District Type

Type of Guideline and Grade Level	Large Wealthy	Large Poor	Small Wealthy	Small Poor
Class Size				
Kindergarten	26	26	27	27
1st through 3rd	26	30	27	27
4th through 6th	28	30	30	27
7th through 12th	29	35	30	none
Remedial courses	17	15	none	none
Overall Pupil Load	114*	none	125**	none

*English only
**except physical education teachers

The language contained within collective bargaining agreements is intentionally vague in order to permit some degree of flexibility with regard to staffing allocations. Phrases such as "every effort shall be made," "whenever possible," and "when physical facilities permit" precede class size targets and overall

[8] It should be noted that past collective bargaining agreements (as far back as 1983) from each of the sites were also reviewed. The present class size and pupil load guidelines, depicted here, do not differ from previous agreements reached in the past.

pupil loads. In addition, interviews revealed that the level of enforcement regarding these contractual guidelines varies from site to site. The class size and pupil load guidelines outlined above, as well as numbers of sections assigned to teachers, are more strictly adhered to in the larger districts. Administrators and teachers in the large, poor district, concurred that if a singleton class exceeded the maximum class size by just one student, an additional section would have to be added or an aid would have to be provided. This also demonstrates the union strength within this particular district.

In contrast, the staffing allocation guidelines within the two small districts are treated as targets rather than requirements. Teachers within the smaller districts are also asked to teach additional sections more frequently than their counterparts in larger districts. One administrator in the small, poor district explained this need for flexibility:

> we can't have anything in the contract which stipulates numbers. If we did that at a small school like this, we would be putting the gun to our heads. We have a mythical figure that we operate on... I also have to get creative with my staff. I can bargain with them. If I need an additional section, I can trade some supervisory duties with a teacher.

Just as there are "mythical" figures for maximum class sizes and pupil loads, there are also unwritten expectations regarding minimum class sizes within the districts in the sample. Unless a course is a part of a required sequence, a special education course, or an advanced placement course, administrators will look to drop an offering if the enrollment is less than fifteen students. This figure drops to around ten students in the two small districts.

Program Initiatives and Student Performance

Program initiatives, usually generated by building principals or site-based management teams, are also considered when making staffing allocation decisions. Central administrators and building principals did report on specific program initiatives they would like to see developed within their schools. These initiatives tend to revolve around those programs which would meet the interests of school board members and taxpayers.

Two of the districts, for example, are developing new initiatives to offer more advanced courses which offer college-level credit. Administrators claimed that these types of initiatives are particularly important when making presentations at budget hearings as they demonstrate the tangible financial rewards (e.g., college tuition savings) associated with additional school spending. These types of courses, the administrators argued, can be a genuine incentive for students to take a rigorous curriculum. An administrator in a small, poor, rural district described the rationale:

> ...I'd like to see our district offer more AP (advanced placement) and college credit courses. Then our taxpayers would get a better bang for their buck. I can demonstrate to them that their tax increases are now paying a bit for college. "Don't tell me I can't have the money for AP--look at the money I will save you later." It also gives me bargaining power with the kids. "Look, you can lighten your load in that first year of college so you don't get burned by calculus or statistics or whatever."

Before expansion of existing programs takes place, efforts are made to re-allocate staff from outdated or ineffective programs. A few administrators also reported that student performance, as measured by achievement test scores, are also considered when determining which programs need to be added, adjusted, or altered. It should be noted, however that these student outcomes do not appear to be a primary driver of resource allocation decisions. One building principal commented on the limited role of student performance in the process:

> ...student outcomes do not play as big a role as other considerations. We do needs assessments but adding and deleting programs is again a function of the numbers. Things like class size, student course selections, and the teachers' contract drive the decisions. As a principal, I am frustrated that I cannot address the needs of the individual student because other practical constraints must be considered first.

Given the outcome-driven orientation of recent reform efforts within the State, it is noteworthy that local practitioners are finding it difficult to focus on student performance when making resource allocation decisions.

Staff Expectations

Personnel within schooling systems have expectations about the configuration of their work schedule and assignments. These staff expectations influence staffing decisions within schooling systems. Principals, for example, attempt to balance out the sometimes competing interests of staff when making teacher assignments. Teachers, for example, maintain that they should be assigned to courses in which they have had experience, training and interest. Some teachers also compete for advanced and Regents level courses and seek to avoid a load with more than one or two lower level courses. Course preferences are typically funneled through the department chairperson/coordinator to the principal who makes the final decisions.

More often than not, teacher seniority is the primary driver of these kinds of allocation decisions. In each of the sample districts, seniority plays a significant role in determining how courses will be distributed. Typically, beginning teachers are assigned more lower level classes than their veteran colleagues. An English teacher from a small, poor, rural district commented on the role of seniority in the process:

> For the majority of my career, I ended up teaching what was leftover because I was low man on the totem pole. It wasn't until older teachers retired and their courses were open, I was able to move into a little more of my own choice. It's never been sort of "what's your best areas or what is your strength. It's always been a past practice and seniority kind of thing.

A veteran history teacher from a large, wealthy, suburban district recalled her frustration earlier in her career regarding the seniority issue:

> ...for the first three years, I did not have a single Regents level history course. I taught all the non-regents classes. I found it real frustrating for those years. There was no sharing and I simply wasn't able to do with the non-regents kids the things I wanted to teach.

Veteran teachers are rarely asked to teach a course outside of his or her area of certification, whereas this is a fairly common occurrence for novice teachers, particularly in the smaller districts. In addition, younger teachers will often be shared between school buildings and are required to travel for part of the school day. While these conditions contribute to the frustration of beginning teachers, these newcomers are typically untenured and are willing to take on difficult assignments.

Facilities and Scheduling Constraints

Facilities and building constraints also drive human resource allocation decisions within schooling systems. Buildings and classrooms will occasionally exceed maximum capacity and additional sections of courses need to be offered, sometimes in a different building. A high school principal in a small, wealthy suburb commented on the recent facilities constraints in his school:

> Our facilities do max out...Last year, for example, we had to split our band because we had 154 students. It became physically impossible to put them all on the stage. We added another course right there. We had to add sections of art and now we are maxed out. We couldn't offer any more if we wanted to...we have no art space left.

As discussed previously, teachers are sometimes assigned to multiple buildings and must travel from assignment to assignment. This has a ripple effect on the allocation of other staff as travel time and different schedules across schools must be taken into consideration. Administrators commented on the difficulties associated with supervising traveling faculty and also reported higher turnover rates among teachers assigned to multiple buildings. In addition to the problems associated with supervising these teachers, administrators suggested that the high turnover rates may be due to teachers' lacking a sense of ownership of the multiple schools in which they teach.

The above review of the variety of factors that influence staffing decisions demonstrates the need to move beyond State collected data in order to understand the resource allocation process within schooling systems. In the next section, I report qualitative findings regarding the local response to State initiated reform.

V. State Initiated Reform: The Practitioner's Perspective

Administrators and veteran secondary school teachers were asked direct questions about the impact of State initiated reform on their work within schooling systems. We solicited their opinions and assessments of both the Regents Action Plan and the New Compact for Learning. Specifically, we asked administrators and veteran teachers to comment on four broad and overlapping categories of reform, all of which have implications for the resource allocation process: 1) increased emphasis on core subject area content; 2) higher standards and expectations for students; 3) increased instructional time; and 4) higher standards and expectations for teachers.

Content Emphases

This area of reform involves the standardization of a "core curriculum" for all students. The Regents Action Plan, for example, emphasized increasing graduation requirements in the five core academic subjects: English, mathematics, science, social studies and foreign language.

Each of the districts in the sample did increase graduation requirements in order to meet the new Regents guidelines. Administrators and teachers commented, however, that these increases did not have much effect on their program offerings because Regents students had typically met those requirements already. One exception is the foreign language area of the curriculum which experienced substantial changes due to the Regents Action Plan. The Action Plan and subsequent legislation increased Regents graduation requirements in foreign language by three units and required that all students pass a proficiency exam in a language other than English. Interview data with administrators and teachers are consistent with the empirical results reported earlier, which indicated substantial increases in intensity and use of resources within foreign languages. Recall that foreign language was the only one of the five core subjects to experience an increase in overall pupil load per FTE teacher.

Teachers of foreign language remarked that these changes have had a substantial impact on the allocation and use of resources within this area of the curriculum. A foreign language department chair from a large, poor, urban high school commented on these changes:

> Foreign language has changed a lot in the last eleven years because languages have become mandated by the State. Whereas before all students who took foreign language were the ones who really wanted to take it, now you are teaching everybody. Now we're in the realm of "I'm here because I have to be here." This makes it a lot more challenging...No matter what you do, you end up teaching to the middle and the middle is not the same as it used to be.

Standards and Expectations for Students

In addition to increasing the graduation requirements described above, this category of reform calls for additional homework and additional assessments of student work. Also included in this category of reform is the effort to improve the academic rigor of course content and instructional materials.

Teachers were particularly concerned about this area of reform and reported that standards and expectations of students have actually declined over time. Each of the fifteen teachers interviewed commented on their struggle to maintain rigorous requirements within their courses. Teachers suggested that students' general attitude toward school have deteriorated and that motivating students to learn has become increasingly more difficult. A foreign language teacher from a small, poor, rural school commented on this change in students' views of school:

> ...attitudes toward professionals, attitudes toward elders, attitudes toward school have all deteriorated. It seems that schools are a microcosm of society and society is deteriorating...We feel the effects of that.

Teachers claim that this change in attitude has required them to alter their instructional strategies in order to motivate their students to complete course work.

> ...you have to make learning fun, you have to entertain, you have to bargain, bribe, cajole... Now it's like "let's make a deal." I'm not much of a deal maker, but my deal is, "if you work with me, I'll work with you. We will have a good time, but there is also a reason for you to be here."

These negotiations between teachers and students extend into homework assignments and course requirements. Teachers are finding it increasingly more difficult to receive completed homework assignments. As a result, some teachers are assigning less homework and less demanding course projects. An English teacher in a large, poor, urban district commented on the adjustments made in Regents offerings:

> I'm finding more and more difficulty getting any homework. We're almost getting to the point where even asking them to do any homework is a personal favor. I don't do term papers any more in my Regents classes. I used to do them...I would automatically assign them and they were done. It got to be such a struggle to get them done and I just don't want to give up the time that I need to focus on the kinds of writing they have to do for the (Regents) exam.

Another English teacher from a small, poor, rural school commented on how standards and expectations have deteriorated with regard to specific content in the curriculum:

> I can't teach the same level of literature because students can't read. The Regents students are just as bad as the Non-Regents kids. I used to teach Charles Dickens. Forget it, I can't teach Charles Dickens. Right now I am teaching Edgar Allan Poe's <u>The Fall of the House of Usher</u>. I have to read it to them and go over it with them because they can't read it on their own...it's too difficult for them.

A social studies teacher in a large, wealthy, suburban high school explained that less stringent grading practices are a reflection of the decrease in standards within the classroom:

> The biggest difference I see in the students is an overall decrease in standards of achievement and what I can expect of them...For example, I found that I continued to correct all the spelling and grammatical errors in research papers like I did 13 or 14 years ago, their grades would be too low...I mean, you can't give everybody a C. I have tried my own experiments with being a hard grader and giving low grades hoping that they will get made enough or motivated enough, but it really doesn't work for many kids.

In sum, these comments by teachers depict a system which has not been able to increase standards and expectations of students within classrooms.

Instructional Time

This category of reform focuses on maximizing the amount of learning opportunities for students through lengthening the school day, lengthening the school year and improving school schedules. In addition to the interview data, collective bargaining agreements and school schedules in each of the four sites were collected to assess any changes in instructional time since 1983.

In each of the four districts in the sample, the length of the school day and year have remained unchanged since 1983. In each of the four districts, schools

operate for 180 instructional days and for approximately 7.5 hours per day.[9] While the length of the school day and year have remained essentially unchanged, schools within the sample have experimented with different building level schedules to maximize learning time. One district, for example, eliminated the homeroom period in secondary schools in order to add instructional minutes elsewhere. Each of the districts have experimented with rotating schedules so that students are not studying the same subject the same time every day.

Teachers expressed frustration that there was no time built into the school day to meet with colleagues for planning and curriculum development purposes. In addition, several teachers indicated that 40 to 50 minute periods limited their instructional strategies. An English teacher at a large, wealthy, suburban high school commented on the need for flexibility in scheduling:

> I would like to have more time to interact with colleagues. I don't see them very much. Part of the problem is our lock-step schedule...I would like to have a way that the schedule could be manipulated that I can get a flex period, or a double period, or a lab period.

Standards and Expectations for Teachers

This category of reform encompasses issues of teacher professionalism and workplace satisfaction. Recommendations in this category of reform include enhancing professional development opportunities, providing teachers a voice in decision-making, encouraging innovation in the classroom through the use of grants and incentives, and reducing teacher workloads. In addition to reducing overall pupil loads, efforts in this area include minimizing disciplinary and administrative burdens for teachers, so that instructional time can be maximized.

Contractually, standards and expectations for secondary school teachers have remained unchanged since 1983 in each of the four districts in the sample. While class size targets and overall pupil load targets vary across sites, these targets have not changed within each of the districts since 1983.[10] Supervisory duties and professional development expectations have also remained unchanged over the period.

When asked about changes in the standards and expectations in the professional lives of teachers, interviewees commented primarily on the shared decision-making component of the New Compact for Learning. Because the New Compact is a relatively new State reform initiative (1991), it is difficult to determine its impact on local districts. Interviewees, however, commented at length about their own assessments of the initiative and provided mixed reviews regarding its implementation and potential longer term impact. In particular, practitioners commented on the expectation that local districts develop and implement a shared decision-making model.

Many of the educators interviewed expressed frustration with the shared decision-making component of the New Compact. Some administrators and teachers

---

[9] The school calendar year typically extends to 187 days with three days devoted to Superintendent's Days and four days for snow emergencies.

[10] See Table 2 for a summary of class size and overall pupil loads in each of the sample districts.

are frustrated that the process takes too long and that struggling to build consensus is more trouble than it is worth. An administrator from a small, wealthy district commented sarcastically on this frustration:

> I think giving decision-making capabilities to people who don't know what they are doing, haven't been trained in this area, and have very little accountability for the decisions is a *wonderful* idea (emphasis added).

The same administrator discussed the amount of time required by shared decision-making:

> It (shared decision-making) takes a lot of my time because it is negotiations, not just time at the table. I spend a lot of time putting together a game plan to be persuasive about what I think the best position is. I purposefully try to stay away from chairing committees...

A foreign language teacher from a large, poor, urban school also commented on the delays sometimes associated with shared decision-making:

> I know there is a need for site-based management and that everyone should have a voice, but I'll be very candid...sometimes you just feel somebody needs to make a decision... it takes so long to make a decision that by the time you make it it's no longer relevant.

Others were concerned that the shared decision-making wasn't being taken seriously in their district and that administrators ended up making the final decisions anyway. An English teacher from a poor, small rural district commented on this concern:

> I feel that administrators are unwilling to give up any of their power in the decision-making. That makes things difficult and makes me reluctant to serve on committees.

Some teachers felt that the reform had very little impact on their classroom.

> They (the reforms) haven't impacted my classroom at all. I'm very cynical, but all of these things come out and it goes for a couple of years and it doesn't work so we try something else. Teaching occurs when I shut my door and I'm with my students and nobody can legislate that.

In one district, the struggle to implement a shared decision-making plan has been complicated by protracted contract negotiations between the school board and the teachers' union. Teachers in this district have been operating without a contract for more than two years and are reluctant to take on additional work on committees and site-based management teams.

Despite these criticisms, teachers and administrators did share some success stories regarding recent efforts to embrace the reform. Each of the teachers interviewed in the small, poor, rural district volunteered information about the successful design and implementation of a K-12 writing curriculum. Teachers felt the effort was successful because it was teacher generated, was inter-disciplinary, and required that participation of each level and subject area of the district.

We took the initiative and we wanted to get involved. We would hold gatherings where teachers from different grade levels and subject areas would share the kinds of writing activities they were doing in math, science, whatever. I thought it showed a lot of professional growth on everyone's part.

VI. Summary of Key Findings

Key Findings Regarding the Resource Allocation Process

- The staffing allocation process is complex and at least six factors are considered when determining staffing needs and priorities within schooling systems: 1) state guidelines; 2) enrollment projections and student needs and wants; 3) collective bargaining agreements; 4) program initiatives and student performance; 5) staff expectations; and 6) facilities and scheduling constraints.
- Student performance, although one of the factors considered, is not a primary driver of resource allocation decisions within the sample school systems.
- School districts, particularly smaller districts, rely heavily on staff who are dually certified and actively recruit teachers who are qualified to teach multiple subjects.
- Teacher seniority plays a significant role in how courses are distributed among the teaching staff. Novice teachers are more likely to be assigned less advanced course offerings and assigned to courses outside their area of expertise and interest.
- Administrators and others expressed the need for more flexibility in the configuration of human resources within the sample school systems.

Key Findings Regarding the Local Response to State Initiated Reform

increased emphasis on core subject area content

- Local decision makers find themselves having to balance student needs and wants with State and community goals and interests. Increased student demands for elective and "non-core" courses is coupled with the State and community expectations for advanced and regents level offerings within the core academic subjects. Of the core subject areas, foreign language experienced the most substantial changes due to the increased graduation requirements associated with the Regents Action Plan.

higher standards and expectations for students

- Veteran teachers reported that standards and expectations of students have actually declined over time. Several veteran teachers reported that they assign less homework and coursework and also grade students less stringently. Teachers argue that it has become increasingly more difficult to motivate students and that they have been forced to lower their standards within courses.

increased instructional time

- The length of the school day and school year within each of the districts in the sample has remained unchanged since 1983. While experimentation with daily

schedules has taken place (e.g., rotating schedules) in each of the districts, interviewees expressed the need for more flexibility to increase the amount of time available for collaboration with colleagues and to maximize learning time for students.

higher standards and expectations for teachers

- Contractually, standards and expectations for secondary school teachers have remained unchanged since 1983 in each of the four districts in the sample. Districts varied in their ability to successfully involve teachers in a decentralized decision-making plan as recommended in the New Compact for Learning.

VII. Discussion

As these findings indicate, complementing and supplementing empirical studies of resource flows with intensive case studies can yield additional insights into the resource allocation process in education. In sum, these findings are both interesting and somewhat disturbing. Administrators and teachers report a high level of student disengagement with schooling. Reports of lowering standards and expectations of students were consistent across each of the sites. There is evidence that the content within courses is less rigorous than it used to be. These findings are disheartening, particular during a period of educational reform in which raising standards and expectations of students are priorities.

In addition, there are local constraints which seem to preclude school districts from allocating and utilizing resources in creative ways. Adherence to past practice is the norm, and administrators and others expressed the need for more flexibility in the process. What is the rationale, for example, that class size targets be applied universally across subject areas? There is potential for more creative configurations of teaching and pupil resources which might involve allowing for larger class sizes in particular subject areas to permit smaller instructional groups in core academic areas or other targeted areas of the curriculum. Additional restructuring efforts are possible to provide longer instructional periods in focus areas and larger blocks of time for teacher planning and collaboration. Creative configurations of teaching and pupil resources requires substantial compromise and negotiation among the various stakeholder groups. Such changes have serious implications for the interpersonal and professional relationships among school personnel.[11] Workplace norms and expectations established over time and through collective bargaining agreements will need to be challenged and debated. Rethinking of pedagogical approaches, grouping of students, and instructional strategies will need to be reconsidered.

The case study work reported here has improved our understanding of students' opportunity to learn and the use of teacher time within classrooms. Gaining a comprehensive picture of resource allocation in education, however, still proves elusive. As useful as this case study evidence is for complementing and supplementing empirical analyses of resource flows, collection of additional classroom and student level data is needed to more fully understand utilization phenomena within schooling systems. Obtaining useful classroom level and student

[11] CPRE has begun to examine this kind of potential more closely through intensive case studies of high performing, restructured schools. See Miles, (1996).

level indicators of resource use would likely involve the use of direct observation techniques and ethnographic methodologies.

Another potential extension of this work involves linking these micro-level resource allocation analyses to measures of student performance. While it is important to understand how resources are allocated and used for equity purposes, concerns about the efficient use of these resources can only be addressed through an understanding of how these resources are translated into student outcomes. Part of the problem associated with this type of work in the past has been the disagreement among educators and others regarding the fundamental purposes of schooling and the specific knowledge and skills we should expect students to acquire. States and localities, however, are in the process of settling these disputes through the establishment of course specific standards and outcome targets. I am optimistic that this progress, coupled with improved data sources and methodologies, will promote significant advances in this area.

Appendices

Interview Instrument
For Use with Veteran High School Teachers[12]

Note: Consistent with the interpretivist research methodology chosen for the qualitative, case study portion of this study, this protocol should only serve as general framework for organizing relevant topics. This general interview guide approach is described by Patton (1990) and presumes that there is common information that should be obtained from each person interviewed. In addition to collecting information common to each respondent, the approach provides a degree of flexibility in the sequencing and wording of interview questions and also permits additional questions and probes as needed.

Introduction

Hello, I am Chris Roellke, a graduate student at Cornell University in the Department of Education and a research assistant for the Finance Center of the Consortium for Policy Research in Education (CPRE). My areas of interest are educational administration, curriculum and instruction, and organizational behavior. This interview will contribute to my dissertation study and I am very grateful for your participation. In this study, I am interested in learning how the work of high school teachers has changed over the last ten years or so. Specifically, I'd like to learn more about the use of your professional time both inside the classroom and outside the classroom. I am going to ask you to reflect on your experiences as a classroom teacher. You were selected because you have at least ten years of experience within this school district. Your responses in this interview will be confidential and your name will not appear on any of the study documents or in the final report. To assure that I am accurate in capturing and understanding what you tell me in the interview, I would like to request your permission to tape record our discussion. I may also take a few notes. If there is anything you wish to say off the record, or if you have any questions or concerns along the way, please let me know.

Your participation in this study is totally voluntary and you may stop the interview at any point. Do you have any questions or concerns at this time?

Background Information

1. How many years have you been teaching? _____
2. How many of those years have been in this school? _____
3. What are your areas of certification?
4. What are the courses you have taught within this school over the last ten years?
5. Which course(s) have you taught the most often?

---

[12] For the purposes of this study, veteran is defined as a teacher who has at least ten years of continuous classroom teaching experience within the same school. In addition, emphasis was placed on those teachers who have been assigned to teach in the core subject areas (English, mathematics, science, social studies, foreign language).

Interview Framework

1. Can you please describe how decisions are made about which courses you will teach in a given school year? In what ways, if any, has this decision-making process changed over the last ten years or so?

2. Has there ever been a situation in which you were particularly happy or unhappy about a course you had been assigned? Please begin by describing the feelings you had prior to teaching the particular course. I would then be interested to hear more about your actual experiences teaching the particular course. What went well, what didn't go well, etc..

3. Can you describe, in general terms, how your experiences as a teacher within this school have changed over the last ten years or so? I would be particularly interested in getting a sense of how your professional satisfaction has changed over the last ten years or so. If it helps to make the time frame more clear, the principal of this school in 1983 was _____.
Probe: Can you think of particular instances in which you felt most professionally satisfied or unsatisfied. Please describe the circumstances which contributed to this satisfaction/dissatisfaction.

4. Can you describe the opportunities for professional development within this school? How have these opportunities changed over the last ten years? What forms of professional development do you find most helpful. Why?

5. You indicated that the course(s) you have taught most often is/are_____.
   a) Can you please describe how the curriculum within this course(s) has/have changed over the last ten years or so?
   b) How has the content of the course(s) changed?
   c) How have your instructional practices changed?
   d) How have the academic requirements of the course(s) changed in terms of homework expectations, evaluation of students, etc..

Probe: What do you think contributes most to these changes?

6. How have your students changed over the last ten years? If it helps to make the time frame more clear, the valedictorian of the class of 1983 was _____ and the class president was _____. In what ways are the challenges they present to you the same? In what ways are they different?

7. In what ways has the New Compact for Learning been implemented in this district/school? What impact has this implementation had on your experiences as a teacher? I would be particularly interested in how the New Compact has had any influence on the use of your professional time.

8. In addition to your teaching responsibilities, what other contractual and professional obligations do you have within this school? How much time do these additional responsibilities entail? How have these additional obligations changed over the last ten years?

Interview Instrument
For Use with District and School Level Administrators[13]

Background Information

1. How many years have you been an administrator? _____
2. How many of those years have been in this school district? _____
3. Have you had other administrative appointments within this school district prior to your current appointment?

Interview Framework

1. Can you please describe how staffing needs are determined within this district/school?
Probes: What impact do State and Federal regulations have on staffing decisions made in this district/school? What impact do State reform efforts have on staffing decisions made in this district/school (e.g., Regents Action Plan, New Compact for Learning, etc.)?

2. How are hiring decisions made within this district/school?
Probes: How important are multiple certification areas?

3. How are decisions made in your district/school about which teachers which class?
Probes: Under what circumstances do you allow a teacher to teach outside his or her certification area? Is additional training provided to teachers who are assigned to teach a course outside their area of certification.

4. How affected are you by collective bargaining agreements in the assignment of teachers to classes?
Probes: Overall course load for teachers, allowances for preparation periods, etc..

5. What are your policies governing class size?
Probes: Does a class have to attract a minimum enrollment level before you will offer the class? If so, under what circumstances might you be willing to make an exception and allow an unusually small class to operate?

6. How common is it to hire part-time professional staff within this district/school?
Probes: How do you deal with a singleton course for which you have no available staffing?

7. Do you have teachers that travel between school buildings? If so, how does this kind of staffing allocation impact your district/school?

8. How would you characterize the allocation of your own time across programs like special education, gifted and talented education, compensatory education, etc..

REFERENCES

Barro, S. M. (1989). Fund distribution issues in school finance: Priorities for the next round of research. Educational Evaluation and Policy Analysis, 11 (1), 17-30.

Carnegie Forum on Education and the Economy. (1986). A nation prepared: Teachers for the 21st century. Hyattsville, MD: Author.

Coley, R. J. (1994). What Americans study revisited. Princeton, NJ: Educational Testing Service Policy Information Center.

Corcoran, T., & Goertz, M. (1995). Instructional Capacity and High Performing Schools. Educational Researcher, 24 (9), 27-31.

Fuhrman, S.H. & Elmore, R.F. (1990). Understanding local control in the wake of state education reform. Educational Evaluation and Policy Analysis 12 (1). 82-96.

Holmes Group (1986). Tomorrow's teachers: A report on the Holmes Group. East Lansing, MI: Holmes Group.

Johnson, S. M. (1990). Teachers at work: Achieving success in our schools. New York: Basic Books.

Lankford, H., & Wyckoff, J. (1995). Where has the money gone? An analysis of school district spending in New York. Educational Evaluation and Policy Analysis, 17 (2), 195-218.

McLaughlin, M. W., & Talbert, J. E. (1990). The contexts in question: The secondary school workplace. In M. W. McLaughlin, J. E. Talbert , & N. Bascia (Eds.), The contexts of teaching in secondary schools: Teachers' realities. New York: Teachers College Press.

Metz, H. H. (1993). Teachers' ultimate dependence on their students. In M. W. McLaughlin, & J. W. Little (Eds.), Teachers' work: Individuals, colleagues and contexts. New York: Teacher's College Press.

Miles, K. H. (1994). Freeing resources for improving schools: A case study of teacher allocation in Boston public schools. Educational Evaluation and Policy Analysis, 17 (4), 476-493.

Monk, D. H., Roellke, C. F., & Brent, B. O. (1996). Teacher resource allocation within New York's public schools: A micro-level analysis (final report to the New York State Board of Regents' Study on Cost Effectiveness in Education). Albany, NY: State Education Department.

Nakib, Y.A. (1995, March). Beyond district level expenditures: Resource allocation and use in Florida's public schools. Paper presented at the annual meeting of the American Education Finance Association, Savannah, GA.

National Commission on Time and Learning (1994). Prisoners of time. Washington, D.C.: U.S. Government Printing Office.

National Commission on Excellence in Education (1983). A nation at risk: The imperative of educational reform. Washington, D.C.: U.S. Government Printing Office.

New York State Education Department (1984). The Board of Regents action plan to improve elementary and secondary education results in New York state. Albany, NY: Author.

New York State Education Department (1991). A new compact for learning. Albany, NY: Author.

New York State Education Department (1996). Report of the Regents task force on time and learning. Albany, NY: Author.

Picus, L.O., Tetreault, D. & Hertert, L. (1995, March). The allocation and use of education dollars at the district and school level in California. Paper presented at the annual conference of the American Education Finance Association, Savannah, GA.

Roellke, C.F. (1996). The local response to state-initiated education reform: Changes in the allocation of human resources in New York State schooling systems, 1983-1995. Doctoral dissertation, Cornell University, Ithaca, NY.

Sedlak, M. W., Wheeler, C. W., Pullin, D. C., & Cusick, P. A. (1986). Selling students short: Classroom bargains and academic reform in the American high school. New York: Teachers College Press.